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ORIGINAL ARTICLE

Phenomenal aspects of auditory verbal hallucinations in post-traumatic reactions

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This study is a preliminary theoretical discussion of possible specificities of AVHs (Auditory Verbal Hallucinations) in PTSD patients, based on the analysis of classic psychopathological literature enriched by personal clinical experience. AVHs have been extensively studied in empirical research, in different clinical and non-clinical samples. Most of these studies do not show significant differences, implicitly suggesting that AVHs are a unique "object" which is present in a wide array of clinical and non-clinical conditions. We claim that this is due to the instruments used to measure the phenomenon, and that a more qualitative study is needed to unveil possible differences. Accordingly, in this paper we focus on AVHs in persons with psychotraumatic reactions and, to highlight distinctions among apparently similar phenomena, we suggest considering AVHs not as fixed, isolated object, but as the articulation of a dynamic, figure-background relationship. In patients with PTSD we found at least four different kinds of AVHs: ***a) AVHs in typical post-traumatic flashbacks.*** *In most cases of PTSD, AVHs appear within dissociative states of consciousness, such as flashbacks that represent one of the consequences of how the traumatic experience affects and modifies the subject's experience.* ***b) AVHs in post-traumatic flashbacks with "double-reality".*** *AVHs, as well as other symptoms with a reliving character, can also be inscribed in brief experiences of dissociation such as depersonalization and derealization.* ***c) AVHs in post-traumatic depression.*** *AVHs are the external projection of the depressive guilt experienced by the patient. In these cases, AVHs are mood congruent, understandably derivable from guilt ideas, and represent the external personification of what the patient thinks.* ***d) "Schizophrenic-like" AVHs.*** *AVHs occur in unaltered state of consciousness and they do not represent well-detailed personalities from the patient's past. Rather, they are vague, impersonal and allusive, as it is often the case with schizophrenic voices.*

Keywords: Auditory Verbal Hallucinations (AVHs), PTSD, Pseudohallucinations, Phenomenology, Consciousness, Dissociation, Flashback, Psychosis, Psychopathology

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EMPIRICAL RESEARCH AND INTERPRETIVE THEORIES

The AVHs (Auditory Verbal Hallucinations) are the hallucinations most frequently studied in empirical research. They are investigated in different clinical and non-clinical samples in order to measure their prevalence (Junginger el al., 1985; Copolov et al., 2004; Nayani et al., 1996; Daalman et al., 2011). According to these studies, voices are present in about 70% of patients with schizophrenic disorder, in 23% of those with bipolar disorder, and range between 1 and 15% in non-clinical subjects. Finally, in traumatic spectrum disorders, such as the borderline personality disorder, dissociative disorders and PTSD, the frequency of this phenomenon does not differ significantly from that found in schizophrenia.

Some formal intrinsic aspects of AVHs were also investigated in these studies, such as the number of voices, their internal or external origin, the accent, volume and duration, their content (imperative, dialoguing, commenting, echo of thought, teleological, insulting or blasphemous), their meaning (forces of good and evil, conspiracies, ghosts, spirits or aliens), and finally some extrinsic characteristics like coping strategies, degree of insight and distress caused by voices. Interestingly, no significant phenomenal differences were found between AVHs in psychotic, affective and traumatic spectrum disorders. Moreover, even in non-clinical subjects AVHs would be not too different from those found in patients, although in non-

clinical individuals voices have earlier onset and coping strategies are more frequent, while in psychotics there is an higher frequency of the emotional negative content of hallucinations (Daalman et al., 2011).

The large amount of data emerging from these researches represents the empirical basis on which two main explanatory models of AVHs have been developed. The first one interprets them as essentially psychotic phenomena (Larøi et al., 2012), while the other sees them as post-traumatic dissociative phenomena (Longden et al., 2012; Moskowitz et al., 2017).

The first model interprets the AVHs as a symptom emerging from a more basic alteration of the Self. In this model, AVHs are understandable only in the context of a profound alteration of experience (specific to schizophrenia) that involves the sense of being immersed in the world, how one relates to other people, the sense of time, the body experience, the sense of agency, perception, thought and emotion. The model rejects the claim that schizophrenic hallucinations are the same as those of other psychiatric patients and interprets the findings on healthy people who hear voices as possible prodromal or under-threshold symptoms in persons at high risk of psychosis. Finally, it outlines a process of AVHs formation in which they are the result of a progressive distancing from one's own mental processes that become less familiar until they are no more recognized as one's own.

On the contrary, the second model sees all AVHs as post-traumatic dissociative phenomena. In particular, the etiological factor would be severe trauma (i.e., childhood and/or adult traumatic experiences), which is found in several diagnostic groups as well as in non-clinical populations. Typically, such traumatic experiences would be mainly relational in nature (interpersonal violence including sexual abuse, torture, war conditions, etc.) and AVHs would result from dissociative mechanisms activated as a reaction to unbearable traumatization.

In sum, it is philosophically interesting that two opposite views coherently derive from the same dataset. How was it possible?

THE QUALITY PROBLEM

In our opinion the two perspective are opposed, nevertheless they share a common basic assumption: i.e. in their view all AVHs are instances of a unique entity which is present in several clinical and non-clinical conditions. Accordingly, they emphasize the fundamental result emerging from empirical research: i.e. all hallucinations are basically similar, independently from the condition in which they are found. Hence, the formal distinctions between, for example, hallucinations and pseudohallucinations, or the persecutory or non-persecutory content, are devoid of diagnostic significance because they do not distinguish psychotic from non-psychotic forms. The same for other features like the degree of insight or the use of coping strategies. In this context, remaining differences such as age of onset or emotional content are considered non-essential, so the basic idea of a unique object of study remains. It is only at this point that the two perspectives diverge. In other words, they do not disagree in the appraisal of the object of study but in its interpretation (always psychotic phenomenon in one case, always dissociative phenomenon in the other case).

We think that available empirical data on AVHs are valid and interesting, and that they contribute a lot to undermine old unverified beliefs. However, due to the nature itself of the instruments used to study this matter (i.e. checklists, rating scales, etc.), they were able to grasp only quantitative aspects and coarse phenomenal characteristics while lacking of a finer description of possible nuanced qualitative phenomenal distinctions. This is understandable because small qualitative distinctions often make it difficult to collect standardized, inter-reliable and replicable data suitable for quantitative research. However, this might be a typical case in which standardization and quantity overcome quality, neglecting that in clinical psychopathology small qualitative differences are often essential. Years ago, one of us defined this as the problem of "scarce phenomenal determination" of the psychopathological symptoms, leading to several diagnostic

problems that cannot be discussed here (Vella & Aragona, 2000).

Concerning hallucinations, this issue was addressed in an elegant study in which positive answers to a self-rated questionnaire were further explored asking for further detailed descriptions based on lived experience. The result was that hallucinations in non-clinical individuals were qualitatively different from hallucinations in schizophrenics (Stanghellini et al., 2012). It is noteworthy that although the authors alerted that hallucinatory or hallucinatory-like experiences could not be reliably and validly assessed without a precise characterization of the phenomenal quality of the experience, subsequent research continued to use only quantitative data derived from questionnaires and rating scales, without further exploration of lived experiences.

Considering this state of the art, this study is part of a larger project aimed at revisiting the phenomenal characterization in empirical research, giving space to qualitative psychopathological differences. It shall be considered as a preliminary theoretical discussion of possible specificities in AVHs in PTSD patients, based on the analysis of classic psychopathological literature enriched by personal clinical experience.

WHICH PSYCHOPATHOLOGICAL PHENOMENA?

In general, we share with many phenomenological psychopathologists the belief that AVHs are part of a wider alteration of the subject's experience, so they have to be studied not only in their intrinsic phenomenal features, but also in a *figure-background relation* with the entire phenomenal picture.

In short, in this paper we tentatively organize the phenomenal study of AVHs as follows:

1. Formal features of hallucinations: e.g. personification, clarity of "perception", multiplicity of voices, imperative character, etc.
2. Content of hallucinations: e.g. persecutory, of guilt, re-experience of the traumatic scene, etc.
3. Other psychopathological phenomena: e.g. delusions, mood disturbances, altered arousal, etc.
4. State of consciousness when hallucinations arrive: e.g. lucid, crepuscular, etc.
5. Temporal dynamic: e.g. sudden onset vs. continuous presence, etc.
6. Position taking: e.g. passive experience vs. interaction, capacity of critique and consciousness of their pathological nature, etc.

This list is not complete and deserves to be further integrated and better detailed in subsequent studies. So the results showed below are preliminary but, we think, useful at least to begin to highlight the issue of the phenomenal specificities of hallucinations in post-traumatic psychopathological reactions.

RESULTS

In patients with PTSD we found at least four different kinds of AVHs. This does not mean that they are distinct objects but distinguishable phenomena. They are the emergence of a dynamic process, and depending on the clinical course sometimes they can be intertwined or present themselves in the same patient in different times.

AVHs in typical post-traumatic flashbacks

This In most cases of PTSD, AVHs appear within dissociative states of consciousness, such as flashbacks that represent one of the consequences of how the traumatic experience affects and modifies the subject's experience.

Flashbacks are dissociative states of consciousness in which the patient relives the same images, the same smells and perceives the same physical sensations and emotions that he felt during the traumatic event. In some cases the dissociative experience is not exactly a reliving of the same happenings but of similar events (e.g. fights, beatings, tortures, equivalent to those really experienced). Although the latter are not, strictly speaking, flashbacks, nevertheless they are formally analogue and can be considered as same phenomenon.

The onset is rapid, often triggered by external or internal stimuli which often have a symbolic link with the past traumatic events. The conclusion is usually also rapid, with sudden return to a lucid state of consciousness (usually without the post-critic altered state of consciousness that, for example, characterizes epilepsy). This dynamic could be described as "switch off/switch on".

The state of consciousness in which the subject suddenly falls is crepuscular or oneiroid; lucidity and orientation are partially compromised, and the full awareness of sensations is lost. The subject appears detached respect to the environment, and has a reduced or absent ability to process external stimuli. He is not easily reactive to the inputs of the persons around him, hardly understands what he is told, and often (but not always) when the crisis fades away he has no memory of what happened during the episode. In other words, as in the typical nightmares of PTSD, in the flashback the subject is detached from the current context to literally relive what happened to him, as if it was a waking dream.

As the term "reliving" suggests, the contents are usually considered as sensory fragments of memory that intrude into the present (so that it is usually said that the person cannot leave the past in the past). So, time is lived by the subject as a "circular time", in which the past periodically returns unchanged into the present.

It shall be stressed that these memories are not experienced as usual, because in that moment they are not memories for the subject, he experiences them as happenings occurring *here and now*. In other words, the experiences refer to past traumatic experiences but are *de facto* lived in the present, as actual events occurring here (although the patient in this moment can *experience* himself in another place) and now (although sometimes it is as if he *is transposed* into another time). This point is important and has to be remarked: seen from the point of view of the patient, these are not memories but hallucinations, i.e. they are not experienced as "I remember of him beating me" but as "I see him trying to hurt me, I hear him screaming at me, I hear the noises of the chains, etc.". As in the classic definition, the patient actually perceives something that does not exist in present reality. This does not mean that they are "failures of the perceptual mechanisms" (we all know that hallucinations usually are not this), rather that they are *experienced* by the subject, in his living experience, as a direct perception (although non-existing for an external observer). Typically, in PTSD flashbacks the hallucinatory experience is multisensorial and in movement. Moreover, all contents are realistic, and they attract the patient's attention pervading almost the entire field of consciousness. Even if the patient is a spectator of the scene that is recurring, he is usually involved emotionally (hyperarousal, with anxiety and extreme fear) and often also behaviorally. Some patients start screaming or fighting with the persecutor, etc., while it is rare the possibility to flee from the perceived danger (more often, there is freezing). Almost always, the intrusive experience is unwanted, distressing, and out of control, i.e. beyond the person's ability to silence them.

Within the multisensorial experiences described above, AVHs are typically present. They are sounds, screams, voices, orders, comments aloud, usually coming from the persecutor(s), i.e. from those persons that committed intentional violence against the patient. Hence, there is a high degree of personification: the voices belong to distinct people (as said, often the abuser's voices), with distinct characteristics, distinct character, distinct purposes, distinct beliefs, distinct functions. Even when, more rarely, the voices do not come from the external space but from within the head (what is usually called pseudohallucination), they correspond to people related to their past traumatic experience, so personification is still present.

Finally, the subject is usually aware of the pathological character of this experience, but only after the flashback ends. During the dissociative state of consciousness, the patient usually lives the situation as real, although in some cases the patient is not totally unaware of the character of flashback of this experience. After the resolution of the crisis, when the patient returns in a lucid state of consciousness, he can take distance from the experience and consider it as a symptom of PTSD. However, some patients (e.g. those coming from countries in which the Western medical model is not universally known) may interpret these symptoms as the sign of a spirit influence or similar. To our knowledge, this experience is never reinterpreted in delusional form.

AVHs in post-traumatic flashbacks with "double-reality"

Compared to the typical flashbacks described in the previous section, there are instances of

partial alteration of consciousness. Instead of an all-encompassing crepuscular state that (almost) totally subtracts the subject from the present situation, there are cases in which the patient at the same time: a) relives the past experience (flashback), b) maintains that such experience is not real, and c) is still in contact (although not with full attention) with the surrounding environment. In other words, it is like living simultaneously in two times, the one of the relived traumatic experience and that of the present world (a sort of double reality). Moreover, AVHs, as well as other symptoms with a reliving character (i.e. sudden emergence of emotions not congruent with the current moment, or somatizations), can also be inscribed in brief experiences of dissociation such as depersonalization and derealization in which there isn't a complete loss of awareness of the external world and orientation. Rapid changes in speech, suddenly appearing detached, sudden changes in mimicry, stiffening of posture, repetitiveness in words or speech, amnesia, suddenly getting up to leave, are all indicators of the fact that the patient is experiencing the two temporal experiences simultaneously, often switching rapidly from one to the other.

AVHs in post-traumatic depression

Negative emotions and mood are an usual reaction to psychotraumatic events and are included in the diagnostic criteria for PTSD. Typically, PTSD patients present depressed mood, negative ideas about their own value and their capacity to recover, find it difficult to project the future, feel guilty about their own role in the traumatic events (e.g., for their forced involvement in violence against others, their inability to protect friends or family members, etc.). Some of these patients may also have AVHs congruent with their mood. For example, one study (Bleich & Moskowits, 2000) reports the case of a 39-year-old man whose tank was hit by a bullet during a battle. He was wounded and some of his comrades were killed. Several weeks later, he began to hear the voices of his dead comrades accusing him of betraying them, leaving them to die and staying alive. The voices also ordered him to join them by committing suicide. This is a typical instance of depressive AVHs in PTSD, the patient hears the voices in a lucid state of consciousness (differential criterion from flashbacks), there is high personification of the persons speaking, the content is clearly related to the traumatic experience but is not a repetition of the experience. Indeed, they are not the mere repetition of words or dialogues the patient had heard during the traumatic events. In contrast, in a case like this one, the voices represent the personal elaboration of the "guilt of the survivor", a phenomenon we know well since the concentration camps. Like Jaspers' delusion-like ideas, in which the delusion is not primary but secondarily and understandably derivable from the basic depressed mood, depressive AVHs in PTSD patients are the external projection of the depressive guilt experienced by the patient (differential criterion from schizophrenic-like voices). They are mood congruent, understandably derivable from guilt ideas, and represent the external personification of what the patient thinks. Consciousness of the pathological character of these voices may vary (some patients recognize they are the product of their mind, others may interpret them delusionally), and coherently some patient may try to commit suicide under their influence.

Although the empirical studies usually do not use this level of qualitative analysis of the psychopathological phenomena, it is likely that many of the voices expressing "themes of combat and guilt" (like voices of dead comrades calling "help" or "doctor", or people screaming) reported by veterans with PTSD were of this kind (e.g. David et al., 1999; Hamner et al., 1999; Bleich & Moskowits, 2000).

"Schizophrenic-like" AVHs

This last group is probably heterogeneous, and the name is not very satisfactory because it risks to suggest a link with schizophrenia which is in doubt. However, the more general term "Psychotic" or "Psychotic-like" would engender the risk of confusion with affective psychoses, overlapping with the above described depressive AVHs that need to remain apart. Consequently, we provisionally use this name.

In this group there are voices in patients

with lucid consciousness, i.e. they also occur in unaltered state of consciousness and in case of dissociation they precede it and do not cease after dissociation is over. In this, they are similar to the already described depressive AVHs. However, they tend to differ in the following features: a) Scarce personification: AVHs do not represent well-detailed personalities from their past. Rather, they are vague, impersonal and allusive, as it is often the case in schizophrenic voices. b) Paranoiac contents: often the patient interacts with one or more voices belonging to entities that report plots against him, speak of secret services, etc. c) Feeble consciousness of disease: the patient usually thinks these entities are real and are really talking to him, and appears unable to consider their vagueness as a counterfactual sign.

When the content is unrelated to the traumatic experience (e.g. "I went in the mosque and I suddenly heard the Prophet asking me to go in the city and convert the infidels") it is easier to talk of psychosis. However, there are cases in which the interpretation is more difficult. For instance, a person has the impression that the secret services are following him, and reacts consequently (for example avoiding places where he thinks they might kidnap him). This is usually interpreted by physicians as a paranoiac content. However, if the patient is a refugee that was really kidnapped and tortured by the secret services of his country before fleeing to a safe nation, is it still a sign of paranoia? Or is it part of an understandable iperarousal and watchfulness consequent to his traumatic experience? In fact, among the various consequences of trauma, the subject can perceive constant and exaggerated negative expectations regarding important aspects of his life, including the relationships with others, and in particular pervasive mistrust for fear of retraumatization.

A thorough investigation of the way patients construct and defend their beliefs is here needed to try to differentiate overvalued ideas based on excessive but understandable alertness from paranoid or paranoiac delusional ideas.

Finally, it is necessary to consider that the question is not always that of the distinction between two different phenomenal pictures, but that of a possible shift towards psychosis, i.e. the transition from one phenomenal level (the post-traumatic reaction) to another (the delusional state).

CONCLUSIONS

This study describes four different types of auditory verbal hallucinations in people with PTSD. Although several studies had reported formal similarities between hallucinations in different DSM disorders and in non-clinical populations, we argued that such a result could be due to the assessment instruments employed. Indeed, the data emerging from common rating scales are not enough detailed to grasp the subtle qualitative differences characterizing psychopathological phenomena.

To highlight differences among apparently similar phenomena, we suggest to consider mental symptoms not as fixed, isolated object, but as the articulation of a dynamic, figure-background relationship. According to the Cambridge model (Berrios, 2013; Aragona & Marková, 2015), the background is represented by the overall clinical picture, the state of consciousness, the personality of the subject and by the social and cultural idioms available for the interpretation and communication of the person's lived experience.

In this paper we tentatively organized the phenomenal study of AVHs on the basis of six features: i.e., intrinsic formal features, content, coexistence of other psychopathological phenomena, state of consciousness, temporal dynamic, and position taking.

Based on this approach, in patients with PTSD we distinguished AVHs during a flashback from AVHs in lucid state of consciousness. In the former case we observed that they typically occur in a crepuscular state of consciousness (although we also described cases of partial alteration of consciousness that we called of "double reality"), are highly personalized, the content is circumscribed to the reliving of the traumatic experience, the appearance is in a switch off/switch on modality, and consciousness of their pathological character is not lost. On the contrary, AVHs occurring with lucid state of consciousness can be of the depressive (personalized, with mood congruent content)

or "schizophrenic-like" kind (vague, with an atmosphere of persecution).

We are aware that this is only a first step towards a better characterization of AVHs in PTSD, so we are confident that this early classification will change in the future in parallel with our improved ability to make phenomenal distinctions. Our hope that as a starting point it will prove useful to invite researchers in psychopathology to give attention to this issue and contribute with further clinically-relevant details.

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